

PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY  
 THE UNIVERSITY OF NORTH CAROLINA  
 FOR THE PERIOD ENDING 06.30.2020

INVESTMENT NAME	PROVIDER	Q2'20	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*	Exp Ratio
<b>MONEY MARKET</b>							
Fidelity Government Money Market	Fidelity	0.00%	1.06%	1.31%	0.82%	0.42%	0.42
CREF Money Market R3	TIAA-CREF	0.06%	1.30%	1.39%	0.90%	0.45%	0.23
Vanguard Federal Money Market	TIAA-CREF	0.08%	1.39%	1.62%	1.10%	0.55%	0.11
BofA Merrill Lynch 3-month U.S. T-Bill	Benchmark	0.02%	1.63%	1.77%	1.19%	0.64%	
<b>STABLE VALUE</b>							
Fidelity Managed Income Portfolio	Fidelity	0.41%	1.85%	1.68%	1.50%	1.33%	0.77
Lincoln Fixed Account*	Fidelity	0.50%	2.05%	2.03%	2.09%	2.29%	0.35
TIAA Traditional Annuity - GRA	TIAA-CREF	Current Rate is 3.00%					
TIAA Traditional Annuity - GSRA	TIAA-CREF	Current Rate is 3.00%					
Hueler Stable Value Index (gross)	Peer Group	0.57%	2.46%	2.33%	2.12%	2.15%	
BofA Merrill Lynch 3-month U.S. T-Bill	Benchmark	0.02%	1.63%	1.77%	1.19%	0.64%	
<b>SHORT TERM BOND</b>							
Vanguard Short Term Bond Index In Pl	Fidelity/TIAA-CREF	1.79%	5.46%	3.47%	2.60%	2.15%	0.05
Short Term Bond Universe	Peer Group	3.97%	3.09%	2.54%	2.12%	2.07%	
Barclays Government/Credit 1-3 Yr	Benchmark	1.17%	4.20%	2.87%	2.11%	1.63%	
<b>INTERMEDIATE TERM BOND</b>							
JPMorgan Core Bond R5	Fidelity	3.50%	8.36%	5.23%	4.24%	3.96%	0.45
Vanguard Total Bond Mkt Index Inst Pl	TIAA-CREF/Fidelity	2.98%	8.98%	5.36%	4.33%	3.81%	0.04
JPMorgan Core Bond R6	TIAA-CREF	3.52%	8.45%	5.36%	4.35%	4.04%	0.34
Intermediate Core Bond Universe	Peer Group	4.12%	7.94%	4.80%	3.89%	3.65%	
Barclays Aggregate Bond Index	Benchmark	2.90%	8.74%	5.32%	4.30%	3.82%	
<b>INTERMEDIATE CORE-PLUS BOND</b>							
MetWest Total Return Bond	TIAA-CREF/Fidelity	4.12%	9.18%	5.66%	4.41%	4.85%	0.37
Intermediate Core Plus Bond Universe	Peer Group	5.79%	7.01%	4.66%	3.98%	4.16%	
Barclays Aggregate Bond Index	Benchmark	2.90%	8.74%	5.32%	4.30%	3.82%	
<b>ALLOCATION--50% TO 70% EQUITY</b>							
Fidelity Balanced K	Fidelity	18.37%	10.65%	9.40%	8.38%	10.52%	0.46
Allocation-50% to 70% Equity Universe	Peer Group	13.26%	2.91%	5.25%	5.37%	8.00%	
60% S&P 500 40% BC Agg	Benchmark	13.48%	9.23%	9.16%	8.54%	10.17%	
<b>WORLD ALLOCATION</b>							
CREF Social Choice Account R3	TIAA-CREF	14.00%	6.01%	6.89%	6.69%	8.39%	0.26
World Allocation Universe	Peer Group	11.95%	-2.43%	2.00%	2.89%	5.53%	
60% MSCI World 40% BC Agg Index	Benchmark	12.71%	6.08%	6.86%	6.49%	8.09%	
<b>ALLOCATION--85%+ EQUITY</b>							
CREF Stock R3	TIAA-CREF	21.33%	2.32%	6.46%	6.97%	10.66%	0.33
Allocation--85%+ Equity Universe	Peer Group	18.85%	-0.60%	4.32%	5.09%	9.39%	
85% S&P 500, 15% BBgBarc Agg	Benchmark	17.81%	8.00%	10.11%	9.90%	12.55%	
<b>LARGE COMPANY VALUE</b>							
JHancock Disciplined Value R6	TIAA-CREF/ Fidelity	16.70%	-10.07%	0.87%	3.48%	10.03%	0.70
Large Value Universe	Peer Group	15.58%	-7.92%	1.93%	4.30%	9.69%	
Russell 1000 Value	Benchmark	14.29%	-8.84%	1.82%	4.64%	10.41%	
<b>LARGE COMPANY BLEND</b>							
Vanguard Instl Index Pl Fund	TIAA-CREF/Fidelity	20.55%	7.51%	10.72%	10.72%	13.98%	0.02
Vanguard FTSE Social Index I	Fidelity	23.37%	11.18%	12.67%	11.64%	14.87%	0.12
Large Blend Universe	Peer Group	19.84%	3.87%	8.11%	8.33%	12.20%	
S&P 500 Index	Benchmark	20.54%	7.51%	10.73%	10.73%	13.99%	
<b>LARGE COMPANY GROWTH</b>							
Fidelity Contrafund K	Fidelity	26.91%	18.06%	16.54%	14.17%	15.69%	0.65
T Rowe Price Instl Large Cap Gr	TIAA-CREF/Fidelity	28.60%	20.48%	19.59%	16.85%	18.36%	0.56
Large Growth Universe	Peer Group	27.77%	18.15%	16.31%	13.09%	15.28%	
Russell 1000 Growth	Benchmark	27.84%	23.28%	18.99%	15.89%	17.23%	
<b>MEDIUM COMPANY VALUE</b>							
MFS Mid Cap Value R4	Fidelity	19.71%	-9.58%	0.94%	3.63%	10.76%	0.86
MFS Mid Cap Value R6	TIAA-CREF	19.78%	-9.45%	1.08%	3.79%	10.80%	0.69
Mid Value Universe	Peer Group	19.38%	-13.29%	-1.74%	2.03%	8.81%	
Russell MidCap Value	Benchmark	19.95%	-11.81%	-0.54%	3.32%	10.29%	

Shading highlights performance at or above median for peer group if available, otherwise at or above benchmark.

\*403(b) Plan only

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<b>MEDIUM COMPANY BLEND</b>							
<b>Vanguard Ext Mkt Idx Instl Plus</b>	<b>TIAA-CREF/Fidelity</b>	<b>31.16%</b>	<b>1.20%</b>	<b>6.46%</b>	<b>6.79%</b>	<b>12.38%</b>	0.05
Mid Blend Universe	Peer Group	22.58%	-2.24%	5.79%	6.76%	12.35%	
Russell MidCap	Benchmark	24.61%	-18.31%	-0.81%	1.85%	8.77%	
<b>MEDIUM COMPANY GROWTH</b>							
<b>MassMutual Sel Mid Cap Gr Eq II</b>	<b>TIAA-CREF/Fidelity</b>	<b>28.62%</b>	<b>5.30%</b>	<b>11.37%</b>	<b>10.43%</b>	<b>14.80%</b>	0.71
Mid Growth Universe	Peer Group	30.95%	11.41%	13.90%	10.68%	13.99%	
Russell MidCap Growth	Benchmark	30.26%	11.91%	14.76%	11.60%	15.09%	
<b>FOREIGN LARGE BLEND</b>							
<b>Amer Funds EuroPac R6</b>	<b>TIAA-CREF</b>	<b>22.77%</b>	<b>3.17%</b>	<b>4.76%</b>	<b>4.90%</b>	<b>7.48%</b>	0.46
<b>Amer Funds EuroPac R4</b>	<b>Fidelity</b>	<b>22.66%</b>	<b>2.79%</b>	<b>4.39%</b>	<b>4.54%</b>	<b>7.10%</b>	0.83
<b>Vanguard Total Intl Stock Index Inst</b>	<b>TIAA-CREF/Fidelity</b>	<b>18.12%</b>	<b>-4.07%</b>	<b>1.12%</b>	<b>2.45%</b>	<b>5.30%</b>	0.08
<b>MFS International Intrinsic Value R4</b>	<b>Fidelity</b>	<b>16.65%</b>	<b>8.56%</b>	<b>8.12%</b>	<b>9.06%</b>	<b>11.23%</b>	0.76
<b>MFS International Intrinsic Value R6</b>	<b>TIAA-CREF</b>	<b>16.68%</b>	<b>8.69%</b>	<b>8.24%</b>	<b>9.18%</b>	<b>11.30%</b>	0.63
Foreign Large Blend Universe	Peer Group	17.02%	-3.90%	0.41%	1.73%	5.42%	
MSCI EAFE	Benchmark	15.08%	-4.73%	1.30%	2.54%	6.22%	
<b>FOREIGN SMALL/MID GROWTH</b>							
<b>T Rowe Price International Discovery</b>	<b>Fidelity</b>	<b>31.43%</b>	<b>12.26%</b>	<b>7.37%</b>	<b>8.29%</b>	<b>10.97%</b>	1.19
<b>T Rowe Price International Discovery I</b>	<b>TIAA-CREF</b>	<b>31.47%</b>	<b>12.39%</b>	<b>7.51%</b>	<b>8.42%</b>	<b>11.04%</b>	1.07
Foreign Small/Mid Growth Universe	Peer Group	25.85%	3.03%	4.55%	5.47%	9.09%	
MSCI World ex USA Smid Cap USD	Benchmark	20.17%	-3.74%	0.89%	3.52%	7.17%	
<b>SMALL COMPANY VALUE</b>							
<b>Goldman Sachs Small Value Inst</b>	<b>Fidelity</b>	<b>17.82%</b>	<b>-20.16%</b>	<b>-4.21%</b>	<b>0.61%</b>	<b>8.89%</b>	0.95
<b>Goldman Sachs Small Value R6</b>	<b>TIAA-CREF</b>	<b>17.83%</b>	<b>-20.15%</b>	<b>-4.21%</b>	<b>0.62%</b>	<b>8.68%</b>	0.94
Small Value Universe	Peer Group	21.58%	-17.53%	-4.98%	-0.13%	7.18%	
Russell 2000 Value	Benchmark	18.91%	-17.48%	-4.35%	1.26%	7.82%	
<b>SMALL COMPANY GROWTH</b>							
<b>T Rowe Price QM US Small-Cap Gr Eq I</b>	<b>TIAA-CREF/Fidelity</b>	<b>24.03%</b>	<b>1.65%</b>	<b>8.95%</b>	<b>8.38%</b>	<b>14.80%</b>	0.65
Small Growth Universe	Peer Group	32.62%	5.46%	10.99%	8.71%	13.26%	
Russell 2000 Growth	Benchmark	30.58%	3.48%	7.86%	6.86%	12.92%	
<b>SPECIALTY-REAL ESTATE</b>							
<b>Cohen &amp; Steers Realty Shares L</b>	<b>Fidelity</b>	<b>12.75%</b>	<b>-4.61%</b>	<b>4.48%</b>	<b>6.75%</b>	<b>10.20%</b>	0.97
<b>Cohen &amp; Steers Instl Realty Shares</b>	<b>TIAA-CREF</b>	<b>12.85%</b>	<b>-4.40%</b>	<b>4.69%</b>	<b>6.99%</b>	<b>10.43%</b>	0.75
Specialty-Real Estate Universe	Peer Group	12.25%	-7.90%	1.76%	4.55%	9.03%	
Dow Jones US Select REIT	Benchmark	9.11%	-17.71%	-1.99%	2.45%	8.27%	
<b>SPECIALTY-REAL ESTATE</b>							
<b>TIAA Real Estate Account</b>	<b>TIAA-CREF</b>	<b>-1.46%</b>	<b>0.99%</b>	<b>3.75%</b>	<b>4.42%</b>	<b>8.17%</b>	0.83
Specialty-Real Estate Universe	Peer Group	12.25%	-7.90%	1.76%	4.55%	9.03%	
NCREIF Property Index	Benchmark	-0.99%	2.69%	5.44%	6.77%	9.70%	
<b>TARGET DATE</b>							
<b>Vanguard Target Retire Inc Tr Plus</b>	<b>TIAA-CREF/Fidelity</b>	<b>7.88%</b>	<b>5.80%</b>	<b>5.48%</b>	<b>5.02%</b>	-	0.06
Retirement Income Moderate	Peer Group	8.99%	4.35%	5.09%	4.54%	5.74%	
Morningstar Lifetime Moderate Income Index	Benchmark	8.55%	-1.38%	2.73%	2.82%	4.64%	
<b>Vanguard Target Retire 2015 Tr Plus</b>	<b>TIAA-CREF/Fidelity</b>	<b>8.89%</b>	<b>5.57%</b>	<b>5.84%</b>	<b>5.55%</b>	-	0.06
2015 Moderate	Peer Group	10.03%	4.14%	4.90%	4.76%	6.80%	
Morningstar Lifetime Moderate 2015 Index	Benchmark	10.18%	5.50%	6.11%	5.57%	7.38%	
<b>Vanguard Target Retire 2020 Tr Plus</b>	<b>TIAA-CREF/Fidelity</b>	<b>11.41%</b>	<b>5.17%</b>	<b>6.18%</b>	<b>6.06%</b>	-	0.06
2020 Moderate	Peer Group	11.20%	4.07%	5.23%	5.07%	7.55%	
Morningstar Lifetime Moderate 2020 Index	Benchmark	11.13%	5.44%	6.36%	5.90%	8.04%	
<b>Vanguard Target Retire 2025 Tr Plus</b>	<b>TIAA-CREF/Fidelity</b>	<b>13.21%</b>	<b>4.95%</b>	<b>6.45%</b>	<b>6.40%</b>	-	0.06
2025 Moderate	Peer Group	12.71%	4.12%	5.65%	5.58%	8.31%	
Morningstar Lifetime Conservative 2025 Index	Benchmark	12.32%	4.87%	6.49%	6.17%	8.73%	
<b>Vanguard Target Retire 2030 Tr Plus</b>	<b>TIAA-CREF/Fidelity</b>	<b>14.59%</b>	<b>4.53%</b>	<b>6.52%</b>	<b>6.58%</b>	-	0.06
2030 Moderate	Peer Group	14.51%	3.45%	5.87%	5.89%	8.87%	
Morningstar Lifetime Conservative 2030 Index	Benchmark	13.84%	3.66%	6.40%	6.32%	9.28%	

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<b>Vanguard Target Retire 2035 Tr Plus</b>	<b>TIAA-CREF/Fidelity</b>	<b>15.93%</b>	<b>4.07%</b>	<b>6.57%</b>	<b>6.75%</b>	-	0.06
2035 Moderate	Peer Group	16.41%	3.56%	6.12%	6.27%	9.32%	
Morningstar Lifetime Conservative 2035 Index	Benchmark	15.45%	1.91%	6.03%	6.28%	9.56%	
<b>Vanguard Target Retire 2040 Tr Plus</b>	<b>TIAA-CREF/Fidelity</b>	<b>17.33%</b>	<b>3.60%</b>	<b>6.61%</b>	<b>6.88%</b>	-	0.06
2040 Moderate	Peer Group	17.58%	2.82%	6.07%	6.25%	9.53%	
Morningstar Lifetime Moderate 2040 Index	Benchmark	16.74%	0.32%	5.59%	6.12%	9.57%	
<b>Vanguard Target Retire 2045 Tr Plus</b>	<b>TIAA-CREF/Fidelity</b>	<b>18.65%</b>	<b>3.08%</b>	<b>6.50%</b>	<b>6.89%</b>	-	0.06
2045 Moderate	Peer Group	18.59%	2.01%	5.74%	6.08%	9.33%	
Morningstar Lifetime Moderate 2045 Index	Benchmark	17.46%	-0.69%	5.23%	5.94%	9.45%	
<b>Vanguard Target Retire 2050 Tr Plus</b>	<b>TIAA-CREF/Fidelity</b>	<b>18.67%</b>	<b>3.10%</b>	<b>6.51%</b>	<b>6.89%</b>	-	0.06
2050 Moderate	Peer Group	18.49%	1.79%	5.81%	6.14%	9.52%	
Morningstar Lifetime Moderate 2050 Index	Benchmark	17.69%	-1.13%	5.03%	5.81%	9.32%	
<b>Vanguard Target Retire 2055 Tr Plus</b>	<b>TIAA-CREF/Fidelity</b>	<b>18.64%</b>	<b>3.09%</b>	<b>6.51%</b>	<b>6.88%</b>	-	0.06
2055 Moderate	Peer Group	18.58%	1.19%	5.28%	5.90%	9.08%	
Morningstar Lifetime Moderate 2055 Index	Benchmark	17.75%	-1.32%	4.92%	5.72%	9.20%	
<b>Vanguard Target Retire 2060 Tr Plus</b>	<b>TIAA-CREF/Fidelity</b>	<b>18.70%</b>	<b>3.18%</b>	<b>6.55%</b>	<b>6.90%</b>	-	0.06
<b>Vanguard Target Retire 2065 Tr Plus</b>	<b>TIAA-CREF/Fidelity</b>	<b>18.67%</b>	<b>3.11%</b>	-	-	-	0.06
2060+ Moderate	Peer Group	18.90%	1.91%	5.77%	6.28%	-	
Morningstar Lifetime Moderate 2060 Index	Benchmark	17.76%	-1.46%	4.81%	5.63%	-	

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